Panasonic Broadcast

AK-HC1800N
Menu Information

Setting of menu items

■How to display the menus

Two methods are used to display the menus.

- **Using AK-HC1800N multi purpose camera to display the menus:**
  ① Hold down the MENU switch on the rear panel of the main unit for at least 3 seconds to display the TOP menu.
  ② Use the UP/DOWN switch to move the cursor to the target item, and press the ENTER switch to move to a menu at a lower hierarchical level.

- **Using AK-HRP150G camera controller**
  ① Press the MENU ON/OFF switch on the AK-HRP150G so that its lamp lights. The TOP menu now appears.
  ② Move the cursor to the target item, and press the MENU switch to move to a menu at a lower hierarchical level.

■TOP menu

When the VIDEO MENU is selected:

```
-USER MENU
 1.MAINTENANCE
 2.SETTING
 3.CAMERA ID
 4.FILE OPERATION
```

When the FILM MENU is selected:

```
-USER MENU (FILM MENU)
 1.MAINTENANCE
 2.SETTING
 3.CAMERA ID
 4.FILE OPERATION
```

Setting of menu items

① MAINTENANCE menu

```
-* MAINTENANCE *
   1.BLACK SHADING
   2.PEDESTAL,GAMMA
   3.FLARE
   4.KNEE,WHITE CLIP
   5.R/B GAIN
   6.DETAIL
   7.SKIN TONE DETAIL
   8.GAIN,AUTO IRIS
   9.SUPER GAIN
  10.FRAME MODE
  11.MATRIX
  12.COLOR CORRECTION
```

[1] BLACK SHADING

```
-** BLACK SHADING **

  DETECTION
  CORRECT(DIG)      :OFF
```

DETECTION
For automatically correcting the black shading.

CORRECT(DIG) [OFF, ON]
For ON/OFF control of the detection correction.

Setting of menu items

① MAINTENANCE menu

[2] PEDESTAL, GAMMA

```
-**  PEDESTAL,GAMMA(1/2)  **

  M PEDESTAL          :+000
  R PEDESTAL          :+000
  B PEDESTAL          :+000
  M GAMMA             :0.45
  R GAMMA             :+00
  B GAMMA             :+00
  M BLACK GAMMA       :+00
  R BLACK GAMMA       :+00
  B BLACK GAMMA       :+00
  GAMMA               :ON
  BLACK GAMMA         :ON
```

M PEDESTAL [–200 to +200]
For adjusting the black level.

R PEDESTAL [–100 to +100]
For correcting the red in relation to the master pedestal.

B PEDESTAL [–100 to +100]
For correcting the blue in relation to the master pedestal.
When the AK-HRP150G has been connected, M PEDESTAL, R PEDESTAL and B PEDESTAL operations cannot be performed using the menu.

M GAMMA
[0.30 to 0.75 (DRS OFF), –10 to +10 (DRS ON)]
For adjusting the gamma characteristics.

R GAMMA
[–15 to +15 (DRS OFF), –10 to +10 (DRS ON)]
For adjusting the gamma characteristics of the red in relation to the master gamma characteristics.

B GAMMA
[–15 to +15 (DRS OFF), –10 to +10 (DRS ON)]
For adjusting the gamma characteristics of the blue in relation to the master gamma characteristics.

M BLACK GAMMA [–32 to +32]
For adjusting the gamma characteristics in the vicinity of the black.

R BLACK GAMMA [–15 to +15]
For adjusting the gamma characteristics of the red in the vicinity of the black in relation to the master gamma characteristics.

Setting of menu items

① MAINTENANCE menu

[2] PEDESTAL, GAMMA

```
-**  PEDESTAL,GAMMA(1/2)  **

  M PEDESTAL          :+000
  R PEDESTAL          :+000
  B PEDESTAL          :+000
  M GAMMA             :0.45
  R GAMMA             :+00
  B GAMMA             :+00
  M BLACK GAMMA       :+00
  R BLACK GAMMA       :+00
  B BLACK GAMMA       :+00
  GAMMA               :ON
  BLACK GAMMA         :ON
```

B BLACK GAMMA [–15 to +15]
For adjusting the gamma characteristics of the blue in the vicinity of the black in relation to the master gamma characteristics.

GAMMA [OFF, ON]
For turning the gamma correction ON or OFF.

BLACK GAMMA [OFF, ON]
For turning the black gamma correction ON or OFF.

When ON has been selected as the DRS setting, the BLACK GAMMA setting does not take effect.

When the VIDEO MENU is selected:

```
-**  PEDESTAL,GAMMA(2/2) **

  EFFECT DEPTH      :1
  DRS               :OFF
```

EFFECT DEPTH [1 to 5]
For selecting the effects of the contrast adjustment when ON has been set for DRS.

DRS [OFF, ON]
For adjusting the contrast automatically when this is set to ON.

When the FILM MENU is selected:

```
-**  PEDESTAL,GAMMA(2/2) **

  CINE GAMMA SELECT:FILM REC
  BLACK STR. LEVEL :00%
  DYNAMIC LEVEL    :500%
```

CINE GAMMA SELECT
[VIDEO REC, FILM REC]
For selecting either the film-use or video-use cine gamma characteristics.

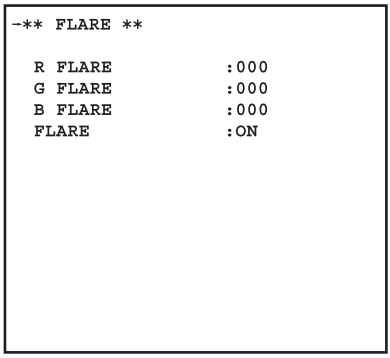
BLACK STR. LEVEL [00% to 30%]
For setting the BLACK STRETCH position.

DYNAMIC LEVEL [200% to 500%]
For setting the dynamic range.

Setting of menu items

① MAINTENANCE menu

[3] FLARE



R FLARE [000 to 100]
G FLARE [000 to 100]
B FLARE [000 to 100]
For adjusting the flare correction.

FLARE [OFF, ON]
For turning the flare correction ON or OFF.

Setting of menu items

① MAINTENANCE menu

[4] KNEE, WHITE CLIP (When the KNEE is set to MANUAL)

```
-** KNEE,WHITE CLIP(1/2) **

  M KNEE POINT      :095.00%
  R KNEE POINT      :+00.00%
  B KNEE POINT      :+00.00%
  M KNEE SLOPE      :50
  R KNEE SLOPE      :+00
  B KNEE SLOPE      :+00
  A.KNEE POINT      :---
  A.KNEE LEVEL      :---
  M WHITE CLIP LVL :109%
  R WHITE CLIP LVL :+00%
  B WHITE CLIP LVL :+00%
```

M KNEE POINT
[080.00% to 107.00% (VIDEO MENU)]
[30% to 90% (FILM MENU/VIDEO REC)]
For adjusting the knee point.

R KNEE POINT [–25.00% to +25.00%]
For correcting the knee point of the red in relation to the master knee point.

B KNEE POINT [–25.00% to +25.00%]
For correcting the knee point of the blue in relation to the master knee point.

M KNEE SLOPE
[00 to 99 (VIDEO MENU)]
[150% to 600% (FILM MENU)]
For adjusting the knee slope.

R KNEE SLOPE [–99 to +99]
For adjusting the knee slope of the red in relation to the master knee slope.

B KNEE SLOPE [–99 to +99]
For adjusting the knee slope of the blue in relation to the master knee slope.

The M KNEE POINT and M KNEE SLOPE settings do not take effect when a setting other than MANUAL is selected for KNEE or ON is selected as the DRS setting when the VIDEO MENU has been selected or when FILM REC is selected as the CINE GAMMA SEL setting when the FILM MENU has been selected.

Similarly, the R/B KNEE POINT and R/B KNEE SLOPE settings do not take effect when a setting other than MANUAL is selected for KNEE or ON is selected as the DRS setting when the VIDEO MENU has been selected or when the FILM MENU has been selected.

Setting of menu items

① MAINTENANCE menu

[4] KNEE, WHITE CLIP (When the KNEE is set to AUTO)

```
-** KNEE,WHITE CLIP(1/2) **

  M KNEE POINT      :---
  R KNEE POINT      :---
  B KNEE POINT      :---
  M KNEE SLOPE      :---
  R KNEE SLOPE      :---
  B KNEE SLOPE      :---
  A.KNEE POINT      :095.00%
  A.KNEE LEVEL      :108%
  M WHITE CLIP LVL  :109%
  R WHITE CLIP LVL  :+00%
  B WHITE CLIP LVL  :+00%
```

A. KNEE POINT [080.00% to 107.00%]
For setting the auto knee break point position. This setting does not take effect when a setting other than AUTO is selected for KNEE or ON is selected as the DRS setting when the VIDEO MENU has been selected or when the FILM MENU has been selected.

A. KNEE LEVEL [100% to 109%]
For setting the maximum level of auto knee. This setting does not take effect when a setting other than AUTO is selected for KNEE or ON is selected as the DRS setting when the VIDEO MENU has been selected or when the FILM MENU has been selected.

M WHITE CLIP LVL [090% to 109%]
For setting the white clip level.

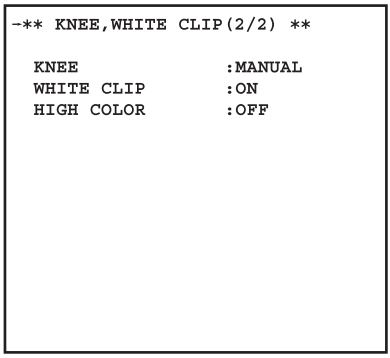
R WHITE CLIP LVL [–15% to +15%]
For correcting the amount of red for the M WHITE CLIP LVL.

B WHITE CLIP LVL [–15% to +15%]
For correcting the amount of blue for the M WHITE CLIP LVL.

Setting of menu items

① MAINTENANCE menu

[4] KNEE, WHITE CLIP

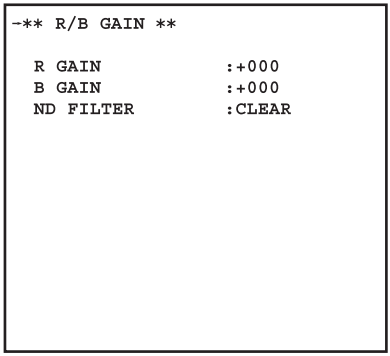


KNEE [OFF, MANUAL, AUTO]
For selecting the knee operation mode.
This setting does not take effect when FILM REC is selected or DRS is ON.

WHITE CLIP [OFF, ON]
For tuning white clip ON or OFF.

HIGH COLOR [OFF, ON]
For improving the color reproducibility of the high-brightness areas when it is set to ON.
This setting does not take effect when a setting other than MANUAL is selected for KNEE or ON is selected as the DRS setting when the VIDEO MENU has been selected or when the FILM MENU has been selected.

[5] R/B GAIN



R GAIN [–200 to +200]
For adjusting the gain of the red.

B GAIN [–200 to +200]
For adjusting the gain of the blue.

ND FILTER [CLEAR, 1/4, 1/16, 1/64]
For selecting the ND filter setting.

When the AK-HRP150G has been connected, the items on this page cannot be operated using the menu.

Setting of menu items

① MAINTENANCE menu

[6] DETAIL

```
-** DETAIL(1/2) **

  DETAIL            :ON
  TOTAL DTL LEVEL   :+00
  H DTL LEVEL       :15
  CRISP             :06
  LEVEL DEPENDENT   :02
  PEAK FREQUENCY    :18
  KNEE APERTURE     :ON
  KNEE APE LEVEL    :3
```

DETAIL [OFF, ON]
For turning all the detail functions ON or OFF.

TOTAL DTL LEVEL [–31 to +31]
For setting the H DTL and V DTL levels.

H DTL LEVEL [00 to 63]
For setting the H DTL level.

CRISP [00 to 31]
For setting the noise elimination level of the detail signals.

LEVEL DEPENDENT [00 to 15]
For removing the detail in the dark areas.

PEAK FREQUENCY [00 to 31]
For setting the H DTL peak frequency.

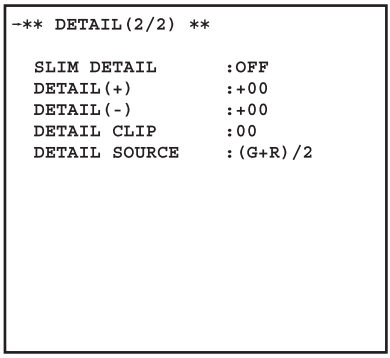
KNEE APERTURE [OFF, ON]
For turning the emphasizing of the outlines for the high-brightness areas ON or OFF.

KNEE APE LEVEL [0 to 5]
For adjusting the knee aperture level.

Setting of menu items

① MAINTENANCE menu

[6] DETAIL



SLIM DETAIL [OFF, ON]
For setting the detail more finely at ON.

DETAIL(+) [–31 to +31]
For adjusting the detail gain in the + direction.

DETAIL(–) [–31 to +31]
For adjusting the detail gain in the – direction.

DETAIL CLIP [00 to +63]
For minimizing the glare caused by adding too much detail as a result of a detail clip adjustment.

DETAIL SOURCE
[(G+R)/2, (G+B)/2, (2G+B+R)/4, (3G+B)/4, R, G]
For setting the ratio of the RGB signal components which create the detail.

Setting of menu items

① MAINTENANCE menu

[7] SKIN TONE DETAIL

```
-** SKIN TONE DETAIL **

  SKIN TONE DTL     :OFF
  SKIN GET          :OFF
  SKIN DTL CORING   :5
  Y MAX             :190
  Y MIN             :010
  I CENTER          :014
  I WIDTH           :090
  Q WIDTH           :010
  Q PHASE           :+082
```

SKIN TONE DTL [OFF, ON]
For turning the SKIN TONE DTL ON or OFF.

SKIN GET [OFF, ON]
When ON is selected, the box cursor is output to the screen center. When the image of the subject's skin is placed inside the box cursor and the ENTER operation is performed,
I CENTER and Q PHASE are set automatically.

SKIN DTL CORING [0 to 7]
For setting the SKIN TONE DTL coring amount.

Y MAX [000 to 255]
For setting the upper limit of the brightness in the skin tone specification area.

Y MIN [000 to 255]
For setting the lower limit of the brightness in the skin tone specification area.

I CENTER [000 to 255]
For setting the phase of the I axis in the skin tone specification area.

I WIDTH [000 to 255]
For setting the phase width of the I axis in the skin tone specification area.

Q WIDTH [000 to 255]
For setting the phase range of the Q axis in the skin tone specification area.

Q PHASE [–128 to +127]
For setting the phase of the Q axis in the skin tone specification area.

Setting of menu items

① MAINTENANCE menu

[8] GAIN, AUTO IRIS

```
-** GAIN,AUTO IRIS **

  LOW GAIN          :+00dB
  MID GAIN          :+09dB
  HIGH GAIN         :+18dB
  A.IRIS LEVEL      :075
  A.IRIS PEAK/AVE   :050
  A.IRIS WINDOW     :NORM1
  IRIS MODE         :LENS
  IRIS GAIN         :05
```

LOW GAIN [–06dB to 30dB]
MID GAIN [–06dB to 30dB]
HIGH GAIN [–06dB to 30dB]
For setting the amount by which the gain is to be increased when LOW, MID or HIGH has been selected by GAIN SELECT.

A.IRIS LEVEL [000 to 100]
For adjusting the target level (brightness) of the auto iris.

A.IRIS PEAK/AVE [000 to 100]
For setting the ratio between the auto iris light-metering peak value and average value.

A.IRIS WINDOW [NORM1, NORM2, CENTR]
For setting the auto iris light-metering area.

- NORM1: The light is metered on the entire screen (except around the edges).
- NORM2: The light is metered on the entire screen (except at the top).
- CENTR: The light is metered only in the area at the screen center.

IRIS MODE [LENS, CAM]
For switching between the iris gain control on the lens (LENS) and the menu (CAM) to adjust the focusing speed of the auto iris. Normally, LENS is selected, and the speed is adjusted using the iris gain control on the lens.

IRIS GAIN [01 to 10]
For adjusting the iris gain when CAM has been selected as the IRIS MODE setting.

Setting of menu items

① MAINTENANCE menu

[9] SUPER GAIN

```
-** S.GAIN(1/2) **  S.GAIN1

  MODE              :S.GAIN1
 *TOTAL GAIN        :30dB
  GAIN              :18dB
  PIX MIX           :+6dB
  V MIX             :+6dB
  FRAME MIX         :OFF
  H DETAIL LEVEL    :10
  CRISP             :10
  LEVEL DEPENDENT   :05
  PEAK FREQUENCY    :10
```

These settings are performed when S.GAIN1, S.GAIN2 or S.GAIN3 has been selected by GAIN SELECT.

MODE [S.GAIN1, S.GAIN2, S.GAIN3]
For selecting the S.GAIN storage table.

TOTAL GAIN [00dB to 72dB]
For displaying the total gain for GAIN, PIX MIX, V MIX and FRAME MIX.

GAIN [00dB to 36dB]
For setting the gain increase.
(The increase is set in increments of 3 dB.)

PIX MIX [OFF, +6dB]
For setting the addition of horizontal pixels ON or OFF.

V MIX [OFF, +6dB]
For setting the addition of vertical pixels ON or OFF.

FRAME MIX [OFF, 06dB to 24dB]
For setting the gain increase based on accumulation in the CCD image sensor.
(The increase is set in increments of 6 dB.)

H DETAIL LEVEL [00 to 63]
For setting the H DETAIL level.

CRISP [00 to 31]
For setting the noise elimination level of the detail signals.

Setting of menu items

① MAINTENANCE menu

[9] SUPER GAIN

```
-** S.GAIN(1/2) **  S.GAIN1

  MODE              :S.GAIN1
 *TOTAL GAIN        :30dB
  GAIN              :18dB
  PIX MIX           :+6dB
  V MIX             :+6dB
  FRAME MIX         :OFF
  H DETAIL LEVEL    :10
  CRISP             :10
  LEVEL DEPENDENT   :05
  PEAK FREQUENCY    :10
```

LEVEL DEPENDENT [00 to 15]
For removing the detail in the dark areas. The higher the number set, the wider the range in which the detail is removed.

PEAK FREQUENCY [00 to 31]
For setting the H DTL peak frequency.

```
-** S.GAIN(2/2) **  S.GAIN1

  M GAMMA           :0.50
  M PED OFFSET      :+000
  R PED OFFSET      :+000
  B PED OFFSET      :+000
```

M GAMMA
[0.35 to 0.75 (DRS OFF)]
[–10 to +10 (DRS ON)]
For adjusting the gamma characteristics.

M PED OFFSET [–200 to +200]
For adjusting the amount of offset in the black level.

R PED OFFSET [–200 to +200]
For adjusting the amount of offset in the R pedestal.

B PED OFFSET [–200 to +200]
For adjusting the amount of offset in the B pedestal.

Setting of menu items

① MAINTENANCE menu

[10] FRAME MODE

```
-** FRAME MODE **

  SCAN REVERSE      :OFF
```

SCAN REVERSE [OFF, REVERSE1 to 3]
For selecting the video output scanning method.

OFF:	Normal scanning
REVERSE1:	Left/right reversed
REVERSE2:	Top/bottom reversed
REVERSE3:	Top/bottom and left/right reversed

[11] MATRIX

```
-** MATRIX **

  MATRIX TABLE      :A
  MATRIX R-G        :+00
  MATRIX R-B        :+00
  MATRIX G-R        :+00
  MATRIX G-B        :+00
  MATRIX B-R        :+00
  MATRIX B-G        :+00
```

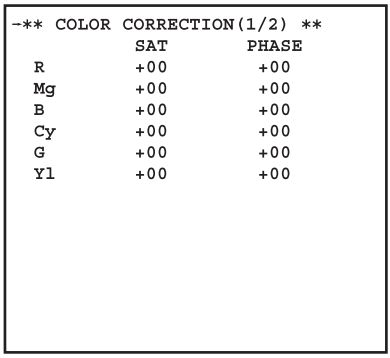
MATRIX TABLE [A, B]
For selecting the table in which the matrix data is to be stored.

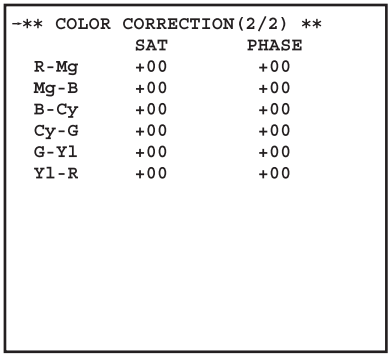
MATRIX R-G [–31 to +31]
MATRIX R-B [–31 to +31]
MATRIX G-R [–31 to +31]
MATRIX G-B [–31 to +31]
MATRIX B-R [–31 to +31]
MATRIX B-G [–31 to +31]
For adjusting the color tone of each color phase.

Setting of menu items

① MAINTENANCE menu

[12] COLOR CORRECTION





R SAT/PHASE [–63 to +63]
Mg SAT/PHASE [–63 to +63]
B SAT/PHASE [–63 to +63]
Cy SAT/PHASE [–63 to +63]
G SAT/PHASE [–63 to +63]
Yl SAT/PHASE [–63 to +63]
R-Mg SAT/PHASE [–63 to +63]
Mg-B SAT/PHASE [–63 to +63]
B-Cy SAT/PHASE [–63 to +63]
Cy-G SAT/PHASE [–63 to +63]
G-Yl SAT/PHASE [–63 to +63]
Yl-R SAT/PHASE [–63 to +63]

For adjusting the color tone of each color phase.

Setting of menu items

② SETTING menu

```
-* SETTING *

  1.MODE
  2.SHUTTER
  3.GEN-LOCK
  4.PROTOCOL
  5.INTELLIGENT1
  6.INTELLIGENT2
  7.INTELLIGENT SET
```

[1] MODE

```
-**  MODE(1/2)  **

  D5600K              :OFF
  GAIN SELECT         :LOW
  CAM ID              :OFF
  CAM ID POSI         :1
  MATRIX TABLE        :OFF
  COLOR CORRECTION    :OFF
  DIGITAL EXTENDER    :OFF
  BAR SEL             :FULL(16:9)
  FORMAT              :1080/59.94i
```

When the VIDEO MENU is selected
D5600K [OFF, ON]

When the FILM MENU is selected
LIGHTING [TUNGSTEN, DAYLIGHT]

ON, DAYLIGHT:
The color temperature is corrected electrically to attain white balance in 5600K-degree environments.

OFF, TUNGSTEN:
The color temperature is corrected electrically to attain white balance in 3200K-degree environments.

GAIN SELECT
[LOW, MID, HIGH, S.GAIN1 to 3]
For selecting LOW, MID, HIGH, S.GAIN1, S.GAIN2 or S.GAIN3 as the gain setting.

CAM ID [OFF, BAR, ON]
For selecting how the camera ID is to be displayed.

OFF: The camera ID is not displayed.
BAR: The camera ID is displayed only in the color bar mode.
ON: The camera ID is displayed at all times.

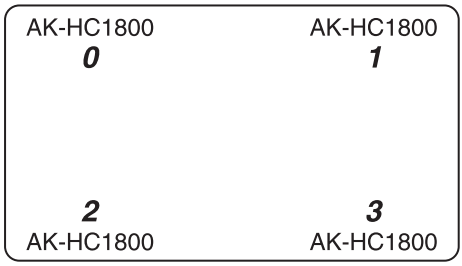
Setting of menu items

② SETTING menu

[1] MODE

```
-**  MODE(1/2)  **

  D5600K              :OFF
  GAIN SELECT         :LOW
  CAM ID              :OFF
  CAM ID POSI         :1
  MATRIX TABLE        :OFF
  COLOR CORRECTION    :OFF
  DIGITAL EXTENDER    :OFF
  BAR SEL             :FULL(16:9)
  FORMAT              :1080/59.94i
```

CAM ID POSI [0 to 3]
For selecting where the camera ID is to be displayed.
0: top left, 1: top right, 2: bottom left,
3: bottom right



MATRIX TABLE [OFF, A, B]
For selecting OFF, A or B as the matrix setting.

COLOR CORRECTION [OFF, ON]
For turning the color correction function ON or OFF.

Note

When DIGITAL EXTENDER is set to X2, the resolution is downgraded. The detail function ceases to work as well.

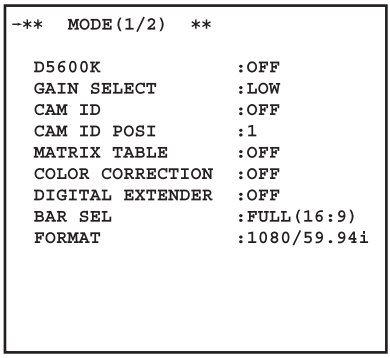
DIGITAL EXTENDER [OFF, X2]
For digitally doubling the images when set to X2.

BAR SEL
[FULL (16:9), FULL (4:3), SMPTE (16:9), SMPTE (4:3), ARIB]
For selecting the color bars.
Select the 4:3 color bars for down-conversion at the system side. The color bars and characters will then be contained within the 4:3 picture angle.

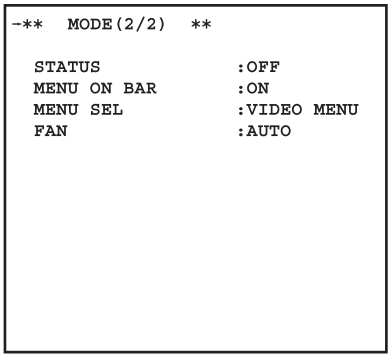
Setting of menu items

② SETTING menu

[1] MODE



FORMAT
For displaying the video output format.
(1080/59.94i)



STATUS [OFF, ON]
For turning the AWB/ABB operation displays ON or OFF.
The status displays are as follows.

AWB ACTIVE:
While automatic white balance is being executed.

AWB OK:
When the automatic white balance has been adjusted satisfactorily.

OUT RANGE RB:
When the automatic white balance has not been adjusted satisfactorily.
(“RB” denotes the colors which were not balanced properly.)

HIGH LIGHT NG:
When the lighting is too high.

LOW LIGHT NG:
When the lighting is too low.

ABB ACTIVE:
While automatic black balance is being executed.

IRIS CONTROL NG:
When the lens is open.

Setting of menu items

② SETTING menu

[1] MODE

```
-**  MODE(2/2)  **

  STATUS              :OFF
  MENU ON BAR         :ON
  MENU SEL            :VIDEO MENU
  FAN                 :AUTO
```

ABB OK:
When the automatic black balance has been adjusted satisfactorily.

OUT RANGE RGB:
When the automatic black balance has not been adjusted satisfactorily.
("RGB" denotes the colors which were not balanced properly.)

AWB OK

MENU ON BAR [OFF, ON]
For selecting whether the menu is to be displayed with the color bars.
Switching from ON to OFF or vice versa is not possible when color bars have been set.

MENU SEL [VIDEO MENU, FILM MENU]
For selecting the menu display.

FAN [OFF, AUTO, ON]
For selecting the operation mode of the air-cooled fan.

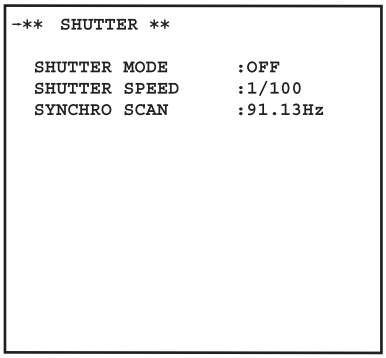
- OFF: The fan is always off.
- AUTO: The fan is automatically controlled by the temperature sensor.
- ON: The fan is running at all times.

At the FAN OFF setting, ensure that the product is operated in an ambient temperature below 86 °F (30 °C).

Setting of menu items

② SETTING menu

[2] SHUTTER



SHUTTER MODE [OFF, ON, SYNCHRO]
For selecting the operation mode of the shutter.

OFF:	For turning the shutter OFF.
ON:	For setting the shutter speed which was set by SHUTTER SPEED.
SYNCHRO:	For setting the shutter speed which was set by SYNCHRO SCAN.

SHUTTER SPEED
[1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000 (VIDEO MENU)]
[180.0 deg, 172.8 deg, 144.0 deg, 120.0 deg, 90.0 deg, 45.0 deg (FILM MENU)]
For setting the shutter speed at the SHUTTER ON setting.

SYNCHRO SCAN
[60.32 Hz to 149.2 Hz]
[356.4 deg to 144.0 deg (FILM MENU)]
For setting the shutter speed in the synchro scanning mode.

Setting of menu items

② SETTING menu

[3] GEN-LOCK

```
-**  GEN-LOCK **

  GEN-LOCK INPUT     :BNC
  H PHASE-COARSE     :+000
  H PHASE FINE       :+000
  SD-HD PHASE CRS    :+0
  SD-HD PHASE FINE   :+00
```

GEN-LOCK INPUT [BNC, DSUB]
For selecting whether the sync signals are to be input from the BNC or D-SUB connector.

H PHASE-COARSE
[–060 to +060]
For roughly adjusting the horizontal phase.

H PHASE-FINE [–045 to +045]
For finely adjusting the horizontal phase.

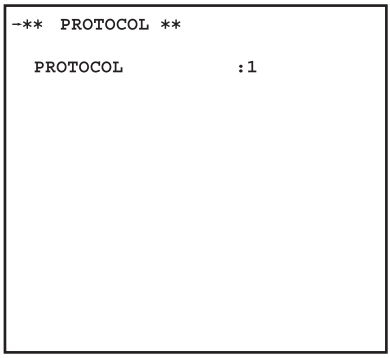
SD-HD PHASE CRS [–4 to +4]
For roughly adjusting the phase of the HD video signals when SD sync signals have been input.

SD-HD PHASE FINE [–99 to +99]
For finely adjusting the phase of the HD video signals when SD sync signals have been input.

Setting of menu items

② SETTING menu

[4] PROTOCOL



PROTOCOL [1 to 4]
For selecting the remote control communication system in accordance with the system connected.

- **1:** Information camera communication protocol (EIA422)
  For connecting the AK-HRP150G or AK-HRP900
  (With the AK-HRP900, this setting cannot be used at a baud rate of 9600 bps.)
- **2:** Information camera communication protocol (EIA232)
  For connecting a PC
  (This setting cannot be used at a baud rate of 9600 bps.)
- **3:** Convertible PC control protocol (EIA422)
  For connecting the AW-CB400
  (baud rate fixed at 9600 bps)
- **4:** Convertible PC control protocol (EIA232) For connecting the AW-PH400 pan/tilt head (baud rate fixed at 9600 bps)

The protocol is actually switched after the power has been turned off and back on.

Setting of menu items

② SETTING menu

[5] INTELLIGENT1

```
-** INTELLIGENT1 (1/2) **
   M-GAIN: 0dB ND-FIL:CLEAR

  INTELLIGENT       :AUTO
  INTELLIGENT MODE  :AGC+ATW
  ND FILTER SELECT  :AUTO
  AGC SPEED         :3
  AGC GAIN STEP     :NORMAL
  HI LIGHT DETECT   :05
  IRIS RANGE        :2
  ATW AREA          :90%
  ATW SPEED         :3
  D5600K            :ON
```

M-GAIN [–6dB to 72dB]
The current gain total is displayed here.

ND-FIL [CLEAR, 1/4, 1/16, 1/64]
The current ND filter position is displayed here.

INTELLIGENT
[MANUAL, AUTO, LOCK]
The operation mode for intelligent control is set here.

- AUTO: AGC and ATW are adjusted automatically.
- LOCK: The status of the AGC and ATW adjustments is held as soon as the INTELLIGENT item setting is changed from AUTO to LOCK.
- MANUAL: Intelligent control is operated using the settings selected from the regular menus and camera controller.

When AUTO or LOCK is set on the INTELLIGENT1 menu, INTELLIGENT2 is set to MANUAL.
Similarly, when AUTO or LOCK is set on the INTELLIGENT2 menu, INTELLIGENT1 is set to MANUAL.
The INTELLIGENT SET menu settings are also switched in tandem.

Setting of menu items

② SETTING menu

[5] INTELLIGENT1

```
-** INTELLIGENT1 (1/2) **
   M-GAIN: 0dB ND-FIL:CLEAR

  INTELLIGENT       :AUTO
  INTELLIGENT MODE  :AGC+ATW
  ND FILTER SELECT  :AUTO
  AGC SPEED         :3
  AGC GAIN STEP     :NORMAL
  HI LIGHT DETECT   :05
  IRIS RANGE        :2
  ATW AREA          :90%
  ATW SPEED         :3
  D5600K            :ON
```

When AUTO or LOCK has been set as the operation mode, restrictions apply to the settings of some of the other menus, as indicated below.

AGC

- The auto iris function is operational regardless of whether the auto iris setting from the camera controller is ON or OFF.
- The setting from the menu and camera controller is not reflected for GAIN SELECT on the SETTING menu.
- The LOW GAIN, MID GAIN, and HIGH GAIN settings for GAIN/AUTO IRIS on the MAINTENANCE menu are not reflected.
- The S.GAIN settings (gain, detail, gamma, and pedestal settings) on the MAINTENANCE menu are not reflected.
- The ND FILTER setting for R/B GAIN on the MAINTENANCE menu is not reflected.

ATW

- R/B GAIN can be controlled from the menu and camera controller, but the white balance is automatically adjusted if the subject is identified as being white.
- AWB is executed in a 25 % × 25 % area at the center regardless of the ATW AREA setting.
  However, what is determined to be the ATW color temperature is not always consistent with AWB, so the white balance may be changed by ATW after AWB has been executed.

Setting of menu items

② SETTING menu

[5] INTELLIGENT1

```
-** INTELLIGENT1 (1/2) **
   M-GAIN: 0dB ND-FIL:CLEAR

  INTELLIGENT       :AUTO
  INTELLIGENT MODE  :AGC+ATW
  ND FILTER SELECT  :AUTO
  AGC SPEED         :3
  AGC GAIN STEP     :NORMAL
  HI LIGHT DETECT   :05
  IRIS RANGE        :2
  ATW AREA          :90%
  ATW SPEED         :3
  D5600K            :ON
```

INTELLIGENT MODE
[AGC, ATW, AGC+ATW]
The intelligent control setting is selected using this menu item.

- AGC: When the gain cannot be adjusted within the IRIS RANGE setting, gain control (including PIX MIX, V MIX, and FRAME MIX) and automatic exposure control performed by adjusting the ND filter setting are executed.
- ATW: When the subject is identified as being white, the white balance is adjusted automatically.
- AGC+ATW: The above AGC and ATW adjustments are performed at the same time.

ND FILTER SELECT
[CLEAR, 1/4, 1/16, 1/64, AUTO]
The ND filter setting during AGC operations is selected using this menu item.

- AUTO: Depending on the light quantity, the ND filter is adjusted to the appropriate position.
- CLEAR, 1/4, 1/16, 1/64: The specified ND filter setting is fixed.

During AGC operations, control cannot be exercised from the camera controller.

AGC SPEED [1 to 5]
The AGC convergence speed can be set to any of 5 levels here.
The speed becomes faster as the figure increases.

Setting of menu items

② SETTING menu

[5] INTELLIGENT1

```
-** INTELLIGENT1 (1/2) **
   M-GAIN: 0dB ND-FIL:CLEAR

  INTELLIGENT       :AUTO
  INTELLIGENT MODE  :AGC+ATW
  ND FILTER SELECT  :AUTO
  AGC SPEED         :3
  AGC GAIN STEP     :NORMAL
  HI LIGHT DETECT   :05
  IRIS RANGE        :2
  ATW AREA          :90%
  ATW SPEED         :3
  D5600K            :ON
```

AGC GAIN STEP [NORMAL, MAX]

The AGC gain increment or decrement step is selected using this menu item.

NORMAL: In the case of underexposure, the gain is incremented from 0 dB to AGC MAX GAIN in very small steps. Conversely, in the case of overexposure, it is decremented from AGC MAX GAIN to 0 dB in very small steps.

MAX: In the case of underexposure, the gain is incremented straight from 0 dB to AGC MAX GAIN. Conversely, in the case of overexposure, it is decremented straight from AGC MAX GAIN to 0 dB. When MAX is selected, set AGC MAX GAIN in such a way that the lens iris adjustment range is not exceeded. (If it is set so that this range is exceeded, iris hunting may occur.)

HI LIGHT DETECT [01 to 10]

When the effective image is exposed to the light from a spotlight, one of 10 levels for ignoring the effect of the light can be selected.

The reaction to the light from the spotlight becomes greater as the figure increases.

Setting of menu items

② SETTING menu

[5] INTELLIGENT1

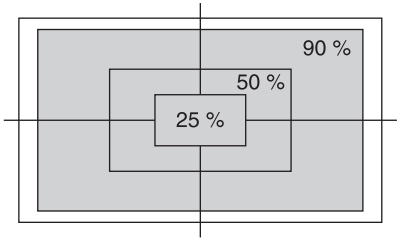
```
-** INTELLIGENT1 (1/2) **
   M-GAIN: 0dB ND-FIL:CLEAR

  INTELLIGENT       :AUTO
  INTELLIGENT MODE  :AGC+ATW
  ND FILTER SELECT  :AUTO
  AGC SPEED         :3
  AGC GAIN STEP     :NORMAL
  HI LIGHT DETECT   :05
  IRIS RANGE        :2
  ATW AREA          :90%
  ATW SPEED         :3
  D5600K            :ON
```

IRIS RANGE [1, 2, 3]
The iris control range during AGC operations is selected using this menu item.

1: F1.8 to F8
2: F1.8 to F11
3: F1.8 to F16

When the iris cannot be adjusted within the above range settings, use the gain (including PIX MIX, V MIX, and FRAME MIX), ND filter, and minus gain settings to adjust the range so that the appropriate level of exposure is achieved.

ATW AREA [25%, 50%, 90%]
The ATW white detection range is selected here.
The range is set to an area that is approximately 25 %, approximately 50 %, or approximately 90 % of the horizontal and vertical angles of view from the screen center, respectively.



ATW SPEED [1 to 5]
The ATW convergence speed can be set to any of 5 levels here.
The speed becomes faster as the figure increases.

Setting of menu items

② SETTING menu

[5] INTELLIGENT1

```
-** INTELLIGENT1 (1/2) **
   M-GAIN: 0dB ND-FIL:CLEAR

  INTELLIGENT       :AUTO
  INTELLIGENT MODE  :AGC+ATW
  ND FILTER SELECT  :AUTO
  AGC SPEED         :3
  AGC GAIN STEP     :NORMAL
  HI LIGHT DETECT   :05
  IRIS RANGE        :2
  ATW AREA          :90%
  ATW SPEED         :3
  D5600K            :ON
```

D5600K [OFF, ON]

The ATW center value is set using this item.

OFF: 3200K

ON: 5600K

The respective ATW tracking ranges are set using ATW WIDTH on the INTELLIGENT SET menu.

```
-** INTELLIGENT1 (2/2) **
   M-GAIN: 0dB ND-FIL:CLEAR

  AGC MODE          :USER
  AGC MAX GAIN      :+09dB(15dB)
  PIX MIX           :+06dB
  V MIX             :+00dB
  FRAME MIX         :+00dB
  SUB MENU
```

AGC MODE
[NORMAL, SPORTS, SN, USER]

The AGC control mode is set here.

NORMAL:
The gain is incremented up to +18 dB by AGC control.

SPORTS:
This setting is for exercising control that is ideally suited to fast-moving images. The gain is incremented in the following sequence: +18 dB for AGC → +6 dB for PIX MIX → +6 dB for V MIX.

SN:
This setting is for exercising control that gives priority to SN. The gain is incremented in the following sequence: +24 dB for FRAME MIX → +6 dB for PIX MIX → +6 dB for V MIX.

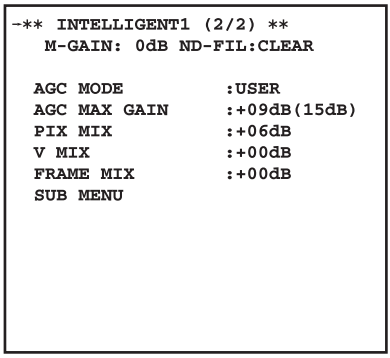
USER:
The gain is incremented in the sequence set using SUB MENU.

When the AGC MODE setting is changed, intelligent control is exercised from the initial status inside the camera. Therefore, immediately after this change is made, the image may become dark or light, and the color temperature may change.

Setting of menu items

② SETTING menu

[5] INTELLIGENT1



AGC MAX GAIN [+00dB to +36dB]
The maximum gain increment for AGC is displayed here. Inside the parentheses on the right is the maximum gain increment, which is obtained by adding the values for PIX MIX, V MIX, and FRAME MIX.

PIX MIX [+00dB, +06dB]
The extent of the horizontal pixel addition is displayed here.

+00dB: No horizontal pixels are added.
+06dB: The sensitivity is doubled over the +00 dB setting. However, the horizontal resolution is reduced to half.

V MIX [+00dB, +06dB]
The extent of the vertical pixel addition is displayed here.

+00dB: No vertical pixels are added.
+06dB: The sensitivity is doubled over the +00 dB setting. However, the vertical resolution is reduced to half.

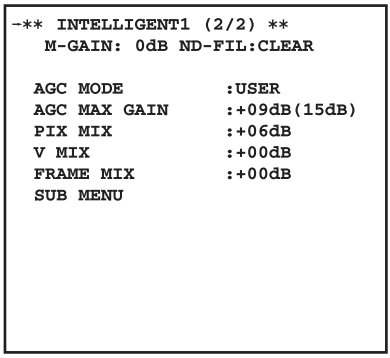
FRAME MIX
[+00dB, +06dB, +12dB, +18dB, +24dB]
The extent of the frame addition (incrementing of gain by CCD storage) is displayed here.

+00dB: No frames are added.
+06dB to +24dB:
2 frames are added with +06 dB, 4 frames are added with +12 dB, 8 frames are added with +18 dB and 16 frames are added with +24 dB, with the sensitivity increasing at each setting. However, the phenomenon of residual image increases.

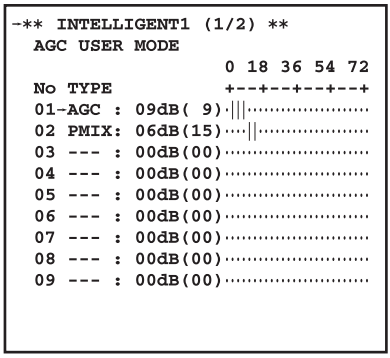
Setting of menu items

② SETTING menu

[5] INTELLIGENT1



SUB MENU
When USER has been selected as the AGC MODE setting, the type of gain, gain increment step, and priority sequence can be set in detail.



The gain is incremented in the sequence of No.01, 02, 03 and so on. It can be set up to No.18.
(No.10 to 18 are displayed on page 2/2.)

When NORMAL, SPORTS, or SN has been selected as the control mode setting, only a display appears.

Move the cursor to TYPE for each number, set the gain type, and then move the cursor to the numbers on the right and set the gain increment step. Inside the parentheses on the right of the setting is the total gain.

The gain can be set in 3 dB increments for AGC up to a maximum of +36 dB, in 6 dB increments for PMIX and VMIX, and in 6 dB increments for FMIX up to a maximum of +24 dB.

If the TYPE setting selected is changed to "– – –", the subsequent settings will be deleted.

Setting of menu items

② SETTING menu

[6] INTELLIGENT2

```
-** INTELLIGENT2 (1/2) **
   M-GAIN: 0dB ND-FIL:CLEAR

  INTELLIGENT       :AUTO
  INTELLIGENT MODE  :AGC+ATW
  ND FILTER SELECT  :AUTO
  AGC SPEED         :3
  AGC GAIN STEP     :NORMAL
  HI LIGHT DETECT   :05
  IRIS RANGE        :2
  ATW AREA          :90%
  ATW SPEED         :3
  D5600K            :ON
```

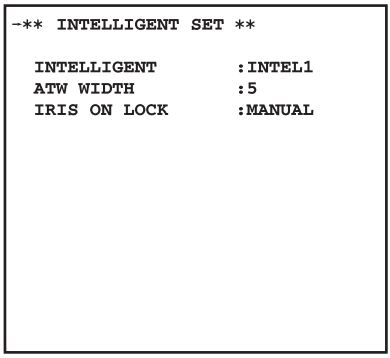
This menu is configured in the same way as the INTELLIGENT1 menu.

```
-** INTELLIGENT2 (2/2) **
   M-GAIN: 0dB ND-FIL:CLEAR

  AGC MODE          :USER
  AGC MAX GAIN      :+09dB(15dB)
  PIX MIX           :+06dB
  V MIX             :+00dB
  FRAME MIX         :+00dB
  SUB MENU
```

Setting of menu items

② SETTING menu

[7] INTELLIGENT SET



INTELLIGENT [INTEL1, INTEL2, OFF]
Intelligent mode OFF, INTEL1 (INTELLIGENT1 menu setting), or INTEL2 (INTELLIGENT2 menu setting) is selected as the operation mode. When the setting of this item is changed, the settings for the INTELLIGENT items on the INTELLIGENT1 and INTELLIGENT2 menus are also changed in tandem.

- OFF: MANUAL is set for INTELLIGENT1 and INTELLIGENT2.
- INTEL1: AUTO is set for INTELLIGENT1 and MANUAL for INTELLIGENT2.
- INTEL2: MANUAL is set for INTELLIGENT1 and AUTO for INTELLIGENT2.

Setting of menu items

② SETTING menu

[7] INTELLIGENT SET

```
-** INTELLIGENT SET **

  INTELLIGENT        :INTEL1
  ATW WIDTH          :5
  IRIS ON LOCK       :MANUAL
```

ATW WIDTH [1 to 5]

The color temperature range (1 to 5) used for tracking ATW is set here.
With D5600K OFF, the range is set centering on 3200K or so; with D5600K ON, it is set centering on 5600K or so.
The general color temperature tracking ranges are listed in the table below.

ATW WIDTH	D5600K OFF	D5600K ON
1	Approx. 3000K to 4000K	Approx. 4500K to 7000K
2	Approx. 2500K to 5000K	Approx. 4000K to 8000K
3	Approx. 2400K to 8000K	Approx. 2500K to 9500K
4	Approx. 1900K to 10000K	Approx. 2400K to 10500K
5	Approx. 1600K to 11000K	Approx. 1600K to 11000K

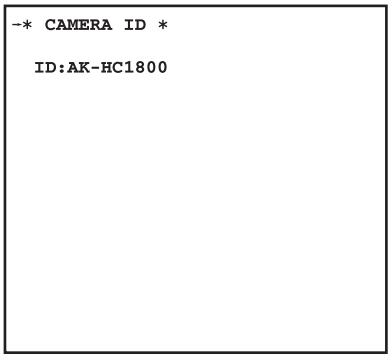
IRIS ON LOCK
[LOCK, MANUAL, PANEL]

The IRIS operation status when the intelligent functions are locked is selected here.

- LOCK: The iris is held in the lock start status.
- MANUAL: The iris is switched to manual operation.
- PANEL: Control that is exercised from the camera controller switches the iris operation between IRIS AUTO and MANUAL.

Setting of menu items

③ CAMERA ID menu

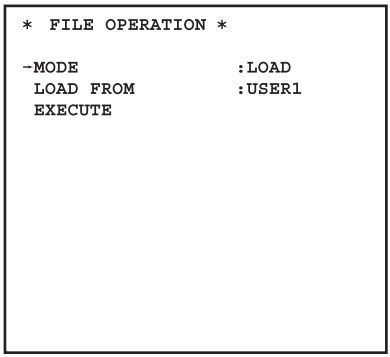


An ID of not more than 10 characters consisting of alphanumerics, symbols and spaces can be set for the camera.
The camera ID is displayed at all times when ON is selected in the CAM ID mode but displayed only when color bar signals are output in the BAR mode.
The status for setting the ID is established by moving the cursor above the colon (:) and selecting it.
Move the cursor to the positions of the characters to be set, select the characters and enter them.

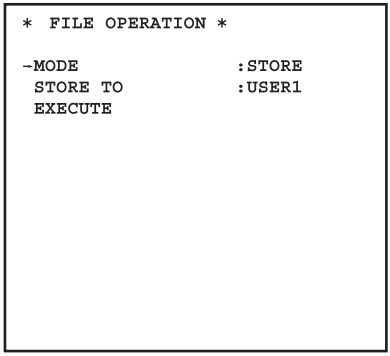
Characters which can be entered:
Spaces, upper-case letters (A to Z), numbers (0 to 9), and symbols (' , >, <, /, -)

Setting of menu items

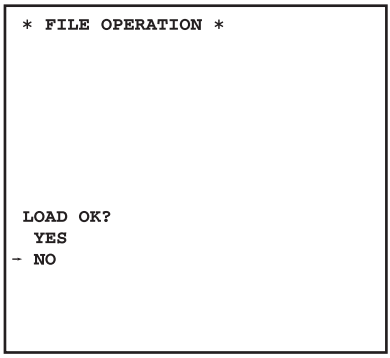
④ FILE OPERATION menu



MODE [LOAD/STORE]
Select LOAD when settings are to be loaded from a file; select STORE when the current settings are to be saved in a file.



LOAD/STORE FROM
For selecting the LOAD or STORE destination.
PRESET, USER1 or USER2 can be selected as the LOAD destination when LOAD has been selected; USER1 or USER2 can be selected as the STORE destination when STORE has been selected.



EXECUTE
When EXECUTE is selected, the "LOAD OK?" or "STORE OK?" message is displayed.
LOAD or STORE is executed when NO is switched to YES and the ENTER operation is performed.
"COMPLETE" is displayed after the data has been loaded or stored.

Setting of menu items

■Menu list

			Scene file items indicated by "✔"
MAINTENANCE	1.BLACK SHADING	DETECTION	–
		CORRECT(DIG)	–
	2.PEDESTAL, GAMMA	M PEDESTAL	✔
		R PEDESTAL	✔
		B PEDESTAL	✔
		M GAMMA	✔
		R GAMMA	✔
		B GAMMA	✔
		M BLACK GAMMA	✔
		R BLACK GAMMA	✔
		B BLACK GAMMA	✔
		GAMMA	✔
		BLACK GAMMA	✔
		EFFECT DEPTH	✔
		DRS	✔
		CINE GAMMA SELECT	✔
		BLACK STR.LEVEL	✔
		DYNAMIC LEVEL	✔
	3.FLARE	R FLARE	✔
		G FLARE	✔
		B FLARE	✔
		FLARE	✔
	4.KNEE, WHITE CLIP	M KNEE POINT	✔
		R KNEE POINT	✔
		B KNEE POINT	✔
		M KNEE SLOPE	✔
		R KNEE SLOPE	✔
		B KNEE SLOPE	✔
		A.KNEE POINT	✔
		A.KNEE LEVEL	✔
		M WHITE CLIP LVL	✔
		R WHITE CLIP LVL	✔
		B WHITE CLIP LVL	✔
		KNEE	✔
		WHITE CLIP	✔
		HIGH COLOR	✔
	5.R/B GAIN	R GAIN	✔
		B GAIN	✔
		ND FILTER	✔
	6.DETAIL	DETAIL	✔
		TOTAL DTL LEVEL	✔
		H DTL LEVEL	✔
		CRISP	✔
		LEVEL DEPENDENT	✔
		PEAK FREQUENCY	✔
		KNEE APERTURE	✔
		KNEE APE LEVEL	✔

Setting of menu items

			Scene file items indicated by "✔"
MAINTENANCE	6.DETAIL	SLIM DETAIL	✔
		DETAIL(+)	✔
		DETAIL(–)	✔
		DETAIL CLIP	✔
		DETAIL SOURCE	✔
	7.SKIN TONE DTL	SKIN TONE DTL	✔
		SKIN GET	✔
		SKIN DTL CORING	✔
		Y MAX	✔
		Y MIN	✔
		I CENTER	✔
		I WIDTH	✔
		Q WIDTH	✔
		Q PHASE	✔
	8.GAIN,AUTO IRIS	LOW GAIN	✔
		MID GAIN	✔
		HIGH GAIN	✔
		A.IRIS LEVEL	✔
		A.IRIS PEAK/AVE	✔
		A.IRIS WINDOW	✔
		IRIS MODE	–
		IRIS GAIN	–
	9.S.GAIN	MODE	–
		TOTAL GAIN	–
		GAIN	✔
		PIX MIX	✔
		V MIX	✔
		FRAME MIX	✔
		H DETAIL LEVEL	✔
		CRISP	✔
		LEVEL DEPENDENT	✔
		PEAK FREQUENCY	✔
		M GAMMA	✔
		M PED OFFSET	✔
		R PED OFFSET	✔
		B PED OFFSET	✔
	10.FRAME MODE	SCAN REVERSE	–
	11.MATRIX	MATRIX TABLE	✔
		MATRIX R-G	✔
		MATRIX R-B	✔
		MATRIX G-R	✔
		MATRIX G-B	✔
		MATRIX B-R	✔
		MATRIX B-G	✔

Setting of menu items

			Scene file items indicated by "✔"
MAINTENANCE	12.COLOR CORRECTION	R SAT/PHASE	✔
		Mg SAT/PHASE	✔
		B SAT/PHASE	✔
		Cy SAT/PHASE	✔
		G SAT/PHASE	✔
		Yl SAT/PHASE	✔
		R_Mg SAT/PHASE	✔
		Mg_B SAT/PHASE	✔
		B_Cy SAT/PHASE	✔
		Cy_G SAT/PHASE	✔
		G_Yl SAT/PHASE	✔
		Yl_R SAT/PHASE	✔
SETTING	1.MODE	D5600K	✔
		LIGHTING	✔
		GAIN SELECT	✔
		CAM ID	–
		CAM ID POSI	–
		MATRIX TABLE	✔
		COLOR CORRECTION	✔
		DIGITAL EXTENDER	–
		BAR SEL	–
		FORMAT	–
		STATUS	–
		MENU ON BAR	–
		MENU SEL	–
		FAN	–
	2.SHUTTER	SHUTTER MODE	✔
		SHUTTER SPEED	✔
		SYNCHRO SCAN	✔
	3.GEN-LOCK	GEN-LOCK INPUT	–
		H PHASE-COARSE	–
		H PHASE-FINE	–
		SD-HD PHASE CRS	–
		SD-HD PHASE FINE	–
	4.PROTOCOL	PROTOCOL	–

Setting of menu items

			Scene file items indicated by "✔"
SETTING	5.INTELLIGENT1 6.INTELLIGENT2	INTELLIGENT	–
		INTELLIGENT MODE	–
		ND FILTER SELECT	–
		AGC SPEED	–
		AGC GAIN STEP	–
		HI LIGHT DETECT	–
		IRIS RANGE	–
		ATW AREA	–
		ATW SPEED	–
		D5600K	–
		AGC MODE	–
		AGC MAX GAIN	–
		PIX MIX	–
		V MIX	–
		FRAME MIX	–
		SUB MENU	–
	7.INTELLIGENT SET	INTELLIGENT	–
		ATW WIDTH	–
		IRIS ON LOCK	–
CAMERA ID	ID:		–

When a scene file is loaded, there may be inconsistencies in some of the items between the status of the connected controller and the status of the camera.
When the controller is operated in this status, the status of the controller will be reflected.